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A Comparison of the Manifest Needs and Teaching Attitudes of Selected Male Freshman and Sophomore Majors in Physical Education at the University of North Dakota

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A COMPARISON OF THE MANIFEST NEEDS AND TEACHING ATTITUDES OF
SELECTED MALE FRESHMAN AND SOPHOMORE MAJORS IN PHYSICAL
EDUCATION AT THE UNIVERSITY OF NORTH DAKOTA

by

Craig B. M. Ashley

B.S. in Education, University of North Dakota 1966

A Thesis

Submitted to the Faculty

of the

University of North Dakota

in partial fulfillment of the requirements

for the Degree of

Master of Science

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August
1967

448145

This thesis submitted by Craig B. M. Ashley in partial fulfillment of the requirements for the Degree of Master of Science in the University of North Dakota is hereby approved by the Committee under whom the work has been done.

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ABSTRACT

The purpose of this study was to compare the manifest psychological needs and teaching attitudes of male freshman and sophomore majors in physical education at the University of North Dakota during the 1966-67 school year. The Edwards Personal Preference Schedule was administered to determine the manifest needs of the subjects. The Minnesota Teacher Attitude Inventory was used to determine the teaching attitudes of the subjects.

The EPPS results of the freshmen and sophomores were compared by the "t" test.

The MTAI results of the freshmen and sophomores were also compared by the "t" test.

The MTAI mean score of the freshmen was correlated with the mean score of each EPPS variable. This procedure was similarly followed using the data of the sophomores.

The .05 level of confidence was used throughout the study.

The sophomores scored significantly higher than the freshmen on the Intraception subscale of the EPPS. Consequently, they were pictured as more empathetic and self-analytical than the freshmen.

No significance was found in the "t" ratio between the two groups (freshmen and sophomores) on the MTAI at the .05 level of confidence. Thus, no differences in their attitudes toward teaching were indicated.

The Order subscale of the EPPS was the sole variable found to be significantly correlated with the MTAI results of the freshmen. These subjects were described as tending to be autocratic while feeling the need to be highly organized and arranged.

The Achievement subscale of the EPPS was the sole variable found to be significantly correlated with the MTAI results of the sophomores. The need of these subjects to be successful and accomplished was significantly related to an autocratic attitude.

CHAPTER I

INTRODUCTION

"With the young, the influence of the teacher's personality is intimately fused with that of the subject; the child does not separate or even distinguish the two."¹ This statement by John Dewey emphasizes the important role the teacher's personality and his attitude toward his profession play in the effectiveness of that teacher's instruction. A teacher who dislikes his position or who is unhappy and dissatisfied with his work does himself, as well as his students, a great harm. Why do individuals in such a predicament of total distaste remain in the school situation? Perhaps because they have spent four years in college to receive their teaching certificates and they feel a need for a return on the investment. Why did they enter the College of Education in the first place? As freshmen, their reasons for wanting to do so would be innumerable, but that was what they wanted at the time. It was not until their junior and senior years, when they were introduced to methods courses, that they began to realize just what was involved in the art and act of teaching, and by then, it was a waste of valuable time to change to another field. Hence, they remained, and graduated.

This was the problem faced by the writer in his junior year. He had entered the field of study of physical education for the primary reason that he enjoyed participating, while experiencing relatively

¹John Dewey, How We Think (Boston: D. C. Heath and Company, 1933), p. 59.

strong success, in all sports and physical activities. He also felt he liked children well enough to spend the rest of his life working with them. However, by the time he entered his senior year of college, the profession of teaching was not as desirable as it had previously been. He found he was not totally in agreement with the normal school situations and occurrences, that a teacher must expect, for the remainder of his career. Hence, he did not want to teach when he graduated, but found it too late to begin again in another field. Thus, he continued in Education for the sake of expediency.

Had there existed in the freshman year reliable predictors of probable satisfaction with, and suitability for, teaching, this conflict might not have occurred.

Statement of the Problem

Through the administration of the Edwards Personal Preference Schedule (EPPS) to male freshmen majoring in Physical Education at the University of North Dakota, this study intended to reveal the present psychological needs of the subjects.

Secondly, through the administration of the Minnesota Teacher Attitude Inventory (MTAI) to these same subjects, this investigation intended to reveal their attitudes toward the various school and teaching situations found in the Inventory.

The identical tests and procedures were applied to the sophomore subjects.

The primary use of this resulting test information was for comparison of the present psychological and attitudinal states of the freshmen and sophomores majoring in physical education.

Need for the Study

At the University of North Dakota, there are literally no screening procedures for suitability as potential Physical Education majors. If a graduating high school senior does minimally well on the American College Test he is admitted into the University without further ado.

The writer proposes that a series of tests, both physical and mental, be administered to incoming freshmen who contemplate majoring in Physical Education. Once these tests have been proven to be valid and reliable in the selection and retention of successful students, then such a screening process might help to solve the problem of the Physical Education Department coping with unsuitable students and students coping with an undesirous area of study.

This present study concerned itself with the mental aspect of the screening process. The department is contemplating the implementation of physical tests in the fall semester of 1967. It was the intention of this writer to describe the first steps required in the process of determining the suitability of freshmen desiring to become physical educators, as concerns their psychological needs and their attitudes toward teaching.

Delimitations

This study presented the statistical treatment of scores made by fifty-one male subjects who were majoring in physical education at the University of North Dakota. The students were classified into the two groups they represented, freshmen and sophomores. A freshman was an individual who had earned from zero to twenty-four (0-24) semester

hours of credit at the completion of the fall semester of the 1966-67 school year. A sophomore was a student who had earned twenty-five to sixty (25-60) semester hours of credit by the end of the same semester.

The Edwards Personal Preference Schedule was used to evaluate the subjects' present manifest psychological needs. The Minnesota Teacher Attitude Inventory was administered to determine their outlook on the various classroom problems and situations found in the test.

All resulting data and conclusions produced by this investigation were related solely to the subjects involved. No generalization to any other student, regardless of whether he was a freshman or sophomore majoring in physical education at the University of North Dakota or not, was intended. This study focused only on the psychological needs and attitudes of those individuals tested and the resulting significant comparisons found in the two groups. However, the information obtained permits later follow-up treatment in three years to describe the type of student who successfully completes his degree in physical education. Furthermore, by administering the same tests to the subjects at that time, it is possible to learn how their attitudes toward the teaching profession may have changed and consequently, to be able more accurately to predict their suitability for that vocation.

Limitations

This investigation was restricted by those limitations that are associated with any abstract topic. The study focused on male, University of North Dakota freshmen and sophomores majoring in physical education. This study did not consider the physical skills and abilities, marital status, socio-economic and cultural backgrounds, and other factors that would further describe the subjects.

Definitions of Terms

Attitude: any settled behavior or conduct, as indicating opinion or purpose regarding anything.¹

Freshman: a student at the University of North Dakota with not more than twenty-four semester hours of credit as of the fall semester of the 1966-67 school year.

Personality: the sum of the qualities or characteristics peculiar to some individual rational being; the prominent traits or attributes of some particular person.²

Psychological needs:³

1. Achievement: to do one's best, to be successful, to accomplish tasks requiring skill and effort, to be a recognized authority, to accomplish something of great significance, to do a difficult job well, to solve difficult problems and puzzles, to be able to do things better than others, to write a great play or novel.
2. Deference: to get suggestions from others, to find out what others think, to follow instructions and do what is expected, to praise others, to accept the leadership of others, to read about great men, to let others make decisions.
3. Order: to have written work neat and organized, to make plans before starting on a difficult task, to have things organized, to keep things neat and orderly, to make advance plans when taking a trip, to organize details of work, to keep letters and files according to some system, to have meals organized and a definite time for eating, to have things arranged so that they run smoothly without change.
4. Exhibition: to say witty and clever things, to tell amusing jokes and stories, to talk about personal adventures and experiences, to have others notice and comment upon one's appearance, to say things just to see what effect it will have on others, to talk about personal achievements, to be the center of attention, to use words that others do not know the meaning of, to ask questions others cannot answer.

¹Funk and Wagnalls, New Standard Dictionary of the English Language (New York: Funk and Wagnalls Company, 1961), p. 184.

²Ibid., p. 1844.

³Allen L. Edwards, Manual: Edwards Personal Preference Schedule (2d. ed. rev.; New York: The Psychological Corporation, 1959), p. 11.

5. Autonomy: to be able to come and go as desired, to say what one thinks about things, to be independent of others in making decisions, to feel free to do what one wants, to do things that are unconventional, to avoid situations where one is expected to conform, to do things without regard to what others may think, to criticize those in positions of authority, to avoid responsibilities and obligations.
6. Affiliation: to be loyal to friends, to participate in friendly groups, to do things for friends, to form new friendships, to make as many friends as possible, to share things with friends, to do things with friends rather than alone, to form attachments, to write letters to friends.
7. Intraception: to analyze one's motives and feelings, to observe others, to understand how others feel about problems, to put oneself in another's place, to judge people by why they do things rather than by what they do, to analyze the behavior of others, to predict how others will act.
8. Succorance: to have others provide help when in trouble, to seek encouragement from others, to have others be kindly, to have others be sympathetic and understanding about personal problems, to receive a great deal of affection from others, to have others do favors cheerfully, to be helped by others when depressed, to have others feel sorry when one is sick, to have a fuss made over one when hurt.
9. Dominance: to argue for one's point of view, to be a leader in groups to which one belongs, to be regarded by others as a leader, to be elected or appointed chairman of committees, to make group decisions, to settle arguments and disputes between others, to persuade and influence others to do what one wants, to supervise and direct the action of others, to tell others how to do their jobs.
10. Abasement: to feel guilty when one does something wrong, to accept blame when things do not go right, to feel that personal pain and misery suffered does more good than harm, to feel the need for punishment for wrong doing, to feel better when giving in and avoiding a fight than when having one's own way, to feel the need for confession of errors, to feel depressed by inability to handle situations, to feel timid in the presence of superiors, to feel inferior to others in most respects.
11. Nurturance: to help friends when they are in trouble, to assist others less fortunate, to treat others with kindness and sympathy, to forgive others, to do small favors for others, to be generous with others, to sympathize with others who are hurt or sick, to show a great deal of affection toward others, to have others confide in one about personal problems.

12. Change: to do new and different things, to travel, to meet new people, to experience novelty and change in daily routine, to experiment and try new and different jobs, to move about the country and live in different places, to participate in new fads and fashions.
13. Endurance: to keep at a job until it is finished, to complete any job undertaken, to work hard at a task, to keep at a puzzle or problem until it is solved, to work at a single job before taking on others, to stay up late working in order to get a job done, to put in long hours of work without distraction, to stick at a problem even though it may seem as if no progress is being made, to avoid being interrupted while at work.
14. Heterosexuality: to go out with members of the opposite sex, to engage in social activities with the opposite sex, to be in love with someone of the opposite sex, to kiss those of the opposite sex, to be regarded as physically attractive by those of the opposite sex, to participate in discussions about sex, to read books and plays involving sex, to listen to or to tell jokes involving sex, to become sexually excited.
15. Aggression: to attack contrary points of view, to tell others what one thinks about them, to criticize others publicly, to make fun of others, to tell others off when disagreeing with them, to get revenge for insults, to become angry, to blame others when things go wrong, to read newspaper accounts of violence.

Sophomore: a student at the University of North Dakota with twenty-five to sixty semester hours of credit as of the fall semester of the 1966-67 school year.

Review of Related Literature

The literature presented below may be categorized into five general areas: (1) the need for candidate selection in teacher training institutions, (2) the importance of personality to successful teaching, (3) personality characteristics of physical education teachers, (4) literature concerning the MTAI, and (5) literature concerning the EPPS.

During the last three decades, when the institutions concerned with the preparation of physical education instructors were being filled and the demand for such individuals levelled off to meet the supply, the physical education profession became increasingly aware that some type

of student screening process was necessary in the selection of the most promising candidates. In fact, as early as 1928, C. L. Brownell had stated:

One might generalize and say that in the future, teacher training institutions must seek to improve their present methods of selecting, admitting, and guiding students to the end that the most desirable talent shall find its way into the profession.¹

This statement is particularly applicable to the last five to ten years. The supply of male physical educators now is more than sufficient to meet expected openings and the necessity of screening is becoming more and more apparent in teacher training establishments.

As a general comment that would suffice to summarize the impressions gained from the literature reviewed, there are, quite understandably, a great many more institutions now screening prospective candidates for teacher training in physical education than there were thirty to forty years ago. In 1953, Jenny² sent questionnaires to more than five hundred accredited American colleges and only 18.8% of the returned forms had any mention of the existence of standards for personality adjustment of their students majoring in health and/or physical education. This percentage has undoubtedly risen since, but the figure would in no way approach that level desirable in relation to the extent personality is considered to be important to the satisfaction from, and success in, teaching. Jenny believed that health and physical educators in training should be dropped from school for failure to meet non-academic standards

¹C. L. Brownell, "The Preparation of Teachers of Health and Physical Education," *American Physical Education Review*, XXXIX (May, 1929), p. 279.

²John H. Jenny, "A Study of Selection, Orientation, and Screening Practices Carried on by Departments of Health and Physical Education in Accredited U. S. Colleges" (Ed. D. Thesis, Temple University, 1953), p. 56.

of health, behavior, and personality.¹ This writer believes that this process should be carried a step farther. Admittance to the University of North Dakota should be disallowed to those high school seniors and incoming freshmen, who contemplate a major in physical education, if certain personality standards are not met at that time.

A prominent national leader in the area of measurement in physical education, C. H. McCloy, mentioned in 1947 that tests, intelligently administered, may measure the innate capacities and abilities of the students and may be used for classification.² The realization, though, that screening procedures were or would be necessary in teacher training institutions was not a recent one, as witnessed by the writings of Broom,³ Bagley,⁴ Cooper,⁵ Crowley,⁶ and Blyler.⁷

It may be accepted then, that, due to increasing enrollments in

¹Ibid., p. 99.

²C. H. McCloy, Tests and Measurements in Health and Physical Education (2d. ed.; New York: F. S. Crofts and Company, 1947).

³M. E. Broom, "The Predictive Value of Three Specified Factors for Success in Practice Teaching," Educational Administration and Supervision, XXV (April, 1939), 250.

⁴William C. Bagley, "An Essentialist Looks at the Foreign Languages," Educational Administration and Supervision, XXV (April, 1939), 250.

⁵Herman Cooper, Application of the Principle of Selective Admission in Teachers Colleges and Its Significance for the Profession (National Education Association, 78th Annual Meeting, 1940), p. 334.

⁶Frances M. Crowley, "Selection by Training Agencies," The Phi Delta Kappan, XXIV (May, 1942), 347.

⁷Dorothea Blyler, "Pretraining Selection of Teachers with Emphasis on the Field of Music Education," Educational Administration and Supervision, XXIX (March, 1943), 130.

colleges and the abundant supply of male physical educators in this country, some screening is needed to insure that those most deserving of, and suitable for, physical education training do get it. What sort of testing, then, is required? Just what distinguishes the more promising candidates from the less promising? The literature overwhelmingly mentions personality as that factor most relevant to successful teaching. The amount of published material emphasizing this relationship between the teacher's personality and his professional enjoyment and effectiveness is voluminous. Suffice it here to mention only a small portion of the literature available concerning this subject.

"The place of personality and personality adjustment in the success of teachers and teacher-training candidates has been accepted generally by employers of teacher training institutions as being essential."¹ Colleges should consider some measure of emotional adjustment as a selection technique.² In summing his review of literature related to the prediction of teaching success in physical education, Handy concluded that more emphasis was on personality as a criterion than on any other factor.³ From a study of vocational competence of male physical education teachers, McCristal stated that " . . . it is known that the correlation between personality and teaching competence tends to be higher than the correlation between teaching competence

¹Jenny, op. cit., p. 56.

²Ibid., p. 97.

³Donald Thomas Handy, "A Predictive Index as a Basis for the Selection of Prospective Teachers in Physical Education" (Ed. d. Thesis, University of California, Los Angeles, 1952), p. 64.

and other factors."¹

From a study exploring the rapport between students and teacher, the factors found most conducive to classroom enjoyment, and ranked in relative importance, were the teacher's method of instruction followed by the teacher's personality, plus four other variables.² Furthermore, should the theory be accepted that personality develops through the interaction with other personalities, then the quality of person-person interaction is significant in determining the degree of influence or the affect which one personality has on another. Thus, if teachers care to improve their ability to teach, improving person-person relations with their students could contribute to this end.³ The impact of personality on rapport does not need to be illuminated here.

Several studies mention that a good teacher's qualifications will include strong personality characteristics. Rated near the top in all of Blesh's returned questionnaires was the personality factor.⁴ Personality rated first in most studies of teacher qualifications reviewed by Kelley,⁵ and the chief consideration in selecting a physical

¹King J. McCristal, "A Study of the Relationship between Certain Undergraduate Success Factors at Michigan State College and the Vocational Competence of Male Physical Education Graduates" (Ed. D. Thesis, Columbia University, New York, 1953), p. 103.

²William B. Michael, Earle H. Herrold and Eugene W. Cryan, "Student-Teacher Relationships," Journal of Educational Research, XLIV (May, 1951), 672.

³Wilbur B. Brookover, "Interaction between Teachers and Pupils," Journal of Educational Research, XXXIX (December, 1940), 287.

⁴T. Irwin Blesh, "Correlation between Success in Student Teaching and Success on the Job," Research Quarterly, XIII (October, 1942).

⁵Elizabeth Kelley, "Comparative Values of Scholarship, Personality, and Skill in the Selection of Physical Education Majors," A Symposium, Journal of Health and Physical Education, XII (December, 1941), 549-553.

education teacher was also personality, as reported by Voltmer and Esslinger.¹ Symonds² and Jaeger³ concur that the quality of the teacher's personality is the most important aspect of his teaching ability and effectiveness. Further support of this strong correlation may be found in the writings of LaPorte,⁴ Davis and Lawther,⁵ Gilson,⁶ Jensen,⁷ and Ryans.⁸

What, then, are the characteristics of a successful teacher, and more particularly, of a successful physical education instructor? Wozencraft mentioned several factors that contributed to the degree of satisfaction and effectiveness any teacher may gain:

1. Each teacher should like teaching.
2. He should be personally secure and must maintain his self-respect, dignity, and courage.
3. He should be able to identify with children.

¹Edward F. Voltmer and A. A. Esslinger, The Organization and Administration of Physical Education (New York: F. S. Crofts and Company, 1938).

²Percival M. Symonds, "Personality of the Teacher," Journal of Educational Research, XL (May, 1947), 652.

³Eloise M. Jaeger, "An Investigation of a Projective Test in Determining Attitudes of Prospective Teachers of Physical Education," (Ph. D. Thesis, University of Iowa, Iowa City, 1952), p. 4.

⁴William R. LaPorte, "A System of Personality Ratings for Prospective Physical Training Teachers," American Physical Education Review, XXVI (January, 1922).

⁵Elwood C. Davis and John D. Lawther, Successful Teaching in Physical Education (New York: Prentice-Hall, Inc., 1941).

⁶Harry V. Gilson, "Why Appraise Teaching Efficiency?" School Executive, LXVII (April, 1948), pp. 47-48.

⁷Alfred Jensen, "Determining Critical Requirements for Teachers," Journal of Experimental Education, XX (September, 1951), 79-85.

⁸David G. Ryans, "Teacher Personnel Research: II; An Investigation of Teacher Characteristics," California Journal of Educational Research, IV (March, 1953), 73-83.

4. He should be an emotionally stable, socially aware individual.
5. He should be free from anxiety, selfishness, and self-centeredness.¹

Many studies have described those personality traits characteristic of a physical educator. Thompson stated that they should be tolerant and cooperative.² Lo Maglio's detailed investigation revealed several variables that describe such an individual. He was inclined to be: sociable, competitive, impulsive, capable of easily changing from one task to another, emotionally stable, adventurous, gregarious, frivolous, sentimental, cheerful, talkative, frank, persevering, determined, responsible, orderly, and dominant.³

Women physical education majors at the University of California were found to be less neurotic; and more extroverted, dominant, self-confident, and sociable than the average college woman.⁴

Comparing those students who continued in physical education training and those who had withdrawn, one study stated that students who were rated higher by their advisors on personality and character traits were the ones who remained in the field of physical education.⁵

¹Marion Wozencraft, "The Teacher's Personality, Progressive Education, XXXIII (January, 1956), 8.

²John C. Thompson, "An Analysis of the Factors Affecting the Achievement of Undergraduate Men in Physical Education at the State University of Iowa" (Ph. D. Thesis, State University of Iowa, Iowa City, 1951), p. 6.

³A. Peter Lo Maglio, "An Investigation and Evaluation of Personality Characteristics of Physical Education Majors in Colleges" (D. P. E. Thesis, Springfield College, Springfield, Mass., 1958), p. 211.

⁴Katherine Gross, "A Study of Interests and Personality Traits of Women Students Majoring in Physical Education" (unpublished M.A. Thesis, University of California, Berkeley, 1943).

⁵Thompson, op. cit., p. 64.

The literature relevant to the EPPS and the MTAI was selected solely for its relationship with the general purpose of this investigation. The use of these tests was recommended by a professional counselor.¹ The writer does not purport to validate the standards of these inventories. Rather, he accepted them as meaningful instruments because of the evidence found in the test manuals and other pertinent literature.

As a test of selecting strong candidates for teacher education, Hardy stated that the MTAI " . . . would be an important aid in selecting students for admission to teacher training institutions."² Munro agreed that the MTAI would be worthy as one of a number of predictors of teaching success.³ Another investigation concluded that students scoring high on the MTAI tended to have an expressed interest in teaching and were rated good prospects by their instructors. Poor students scored less well on the MTAI.⁴ A further study declared that students who made low final MTAI scores planned significantly less often to be teaching in ten years than those with high scores.⁵ As a final word

¹Interview with Eldon M. Gade, Ph. D., member of the American Psychological Association, March, 1967.

²J. Hardy, "A Validation Study of the MTAI in Manitoba" (unpublished Master's Thesis, University of Manitoba, Winnipeg, 1955), p. 213.

³Barry C. Munro, "The MTAI as a Predictor of Teaching Success," *Journal of Educational Research*, LVIII (November, 1964), 139.

⁴M. M. Downie and C. R. Bell, "The MTAI as an Aid in the Selection of Teachers," *Journal of Educational Research*, XLVI (May, 1953), 704.

⁵Leon T. Ofchus and William J. Gnagey, "Factors Related to the Shift of Professional Attitudes of Students in Teacher Education," *Journal of Educational Psychology*, LIV (June, 1963), 152.

on the general worth of the MTAI, Popham and Trimble¹ stated that it can be used as an index of overall teaching effectiveness.

The literature revealed little usage of the MTAI with physical education personnel. However, Gruber concluded that the MTAI was an appropriate instrument to include in a selection and guidance program for potential students of physical education since it was found that students projected the same traits as did the teaching groups.² Hence, a reliable comparison can be achieved.

The EPPS has been widely used in guidance work and its applications are widespread. The test measures the manifestations of the fifteen normal needs described by Murray.³

Thorpe's study concerning female physical education students and teachers revealed, through the EPPS, that the successful teachers scored significantly higher than the normative group on the Deference, Endurance, Dominance, and Intraception subscales. The total group (students and teachers) scored significantly lower than the norm group in Exhibition, Abasement, Nurturance, Succorance, Heterosexuality, and Aggression.⁴

According to Locke,⁵ since his physical education group scored

¹W. James Popham and Robert R. Trimble, "The MTAI as an Index of General Teaching Competence," Educational and Psychological Measurement, XX (Autumn, 1960), 509.

²John J. Gruber, "Personality Traits and Teaching Attitudes," Research Quarterly, XXXI (February, 1961), 438.

³Henry A. Murray, Exploration in Personality (New York: Oxford University Press, 1938), p. 12.

⁴JoAnne Thorpe, "Personality Variables in Women Physical Education Students and Teachers," Research Quarterly, XXIX (March, 1958), p. 91.

⁵Lawrence F. Locke, "Performance of Male Physical Educators on Selected Psychological Tests," Research Quarterly, XXXIII (October, 1962), pp. 422-28.

differently on the EPPS than teachers of other subjects, differences in certain personality dimensions do exist. On three separate subscales of the Schedule, Succorance, Affiliation, and Nurturance, the physical education group's scores were significantly higher at the .05 level when compared with teachers of other fields.

Summary of Reviewed Literature

The literature revealed that the need for candidate selection in teacher training institutions had been considered long before the influx of World War II babies converged on the nation's campuses within the last ten years. The idea was strongly considered in the 1920's and 1930's to insure that better mentally adjusted candidates were given the opportunity to receive teacher education.

Today, this need is even more urgent due to the overcrowded classrooms and the diminishing demand for male physical educators. The percentage of institutions employing such a procedure is far short of that expected in light of its need.

As a factor to be considered in the selection of candidates, personality was overwhelmingly found to be the prime, or one of the prime, considerations. Several investigations were cited to support this contention.

Little agreement was evident among the various studies as to what particular personality characteristics did exemplify a successful, secure physical educator. Perhaps it is impossible to determine categorically the personality and attitudinal state of the effective physical education teacher. Other factors, such as the geographical region or socio-economic status of the teachers may be influential

in such traits. Generally, however, the physical educator was pictured as an out-going, sociable character, aware of the feelings of others.

Little use of either the MTAI or the EPPS, dealing with the field of physical education, was found. The tests' worth, though, in measuring what they purport to evaluate was substantiated.

CHAPTER II

METHODS AND PROCEDURES

The subjects for this investigation were fifty-one young men, ranging in age from seventeen to twenty-seven. This total group represented thirty freshmen and twenty-one sophomores, all majoring in physical education at the University of North Dakota. A freshman was designated as a student who had earned not more than twenty-four semester hours of credit by the end of the fall semester of the 1966-67 school year. A sophomore was an individual with twenty-five to sixty semester hours of credit at the conclusion of the same semester.

The Edwards Personal Preference Schedule (EPPS) and the Minnesota Teacher Attitude Inventory (MTAI) were administered to all subjects in the classrooms of the University Fieldhouse. All subjects completed the tests in one or two sittings. Regardless of the time of administration, each subject completed first the EPPS. The subjects generally required forty to forty-five minutes to complete the EPPS and twenty to thirty minutes to complete the MTAI.

The resulting data were treated in the following manner. The "t" test was applied to each of the fifteen subscales of the EPPS, comparing the scores of the freshmen and the sophomores. This was done to determine what differences in psychological needs, if any, existed between the two groups. Results were considered acceptable if found to be significant at the .05 level of confidence.

The "t" test was also applied to the scores obtained on the MTAI, again comparing the results obtained by the freshmen with the sophomores. Results were significant if they reached or exceeded the .05 level of confidence.

The Pearson-Product Moment Correlation technique was used to correlate the fifteen EPPS subscales with the MTAI scale for both the freshman and sophomore groups. Those results significant at the .05 level of confidence were accepted.

In determining significant results, the table of "student's" t^1 and Pearson's r Correlation Coefficient² of Peatman's text were used.

¹John G. Peatman, Introduction to Applied Statistics (New York: Harper and Row, 1963), p. 401.

²Ibid., p. 406.

CHAPTER III

ANALYSIS OF DATA

The purpose of this investigation was to compare thirty freshmen and twenty-one sophomores with respect to psychological needs and attitudes as measured by the Edwards Personal Preference Schedule (EPPS) and the Minnesota Teacher Attitude Inventory (MTAI), respectively.

The "t" tests were used to compare group means of the freshmen with those of the sophomores on each of the EPPS subscales. The "t" test statistic was used to test for significant differences between MTAI scores of the two groups.

The third treatment of the data correlated each of the fifteen EPPS subscale scores of the freshmen and sophomores with their MTAI scores, using the Pearson-Product Moment Coefficient Correlation (r). It was hypothesized that a positive relationship would exist between the MTAI scores and scores on the Nurturance and Succorance subscales and a negative relationship with scores on the Dominance and Aggression subscales. No other directional hypotheses were projected. This total procedure was also followed using the sophomores' scores on both tests and using the scores of both freshmen and sophomores combined.

The .05 level of confidence was used throughout the study.

Table 1, page 22, illustrates the computed means and standard deviations of the subjects (freshmen, sophomores, total group) and of a normative group from the EPPS Manual,¹ namely the male, college sample. The freshman and sophomore groups were comprised of twenty-five and eighteen subjects respectively. This study could not use all of the subjects' EPPS scores because some of their tests were not answered consistently.

From an inspection of the Mean columns of Table 1, page 22, it is seen that the freshmen scored higher than the sophomores on the Heterosexuality, Aggression, and Change subscales. The sophomores scored higher on the Intraception, Dominance, and Endurance subscales.

The total group of subjects scored below the mean score of the norm group on the Achievement, Exhibition, Intraception, and Dominance subscales of the EPPS. The total group scored higher than the norm group on the Abasement subscale.

The greatest difference between the freshmen and the sophomores was found in the Intraception subscale. The greatest difference between the total group and the norm group was found in the Abasement subscale.

By applying the "t" test to the scores for each of the EPPS variables, the Intraception subscale was the only variable found to be significant at the .05 level, as seen in Table 2, page 23. Since the relationship was negative, the sophomores scored significantly higher on this scale and revealed that they were more analytical of their behavior and that of others than were the freshmen.

¹Edwards, op. cit., p. 10.

TABLE 1

THE MEAN AND STANDARD DEVIATION VALUES OF THE EPPS SUBSCALES FOR THE FRESHMEN,
SOPHOMORES, TOTAL GROUP, AND THE NORMATIVE SAMPLE

Variable	MEANS				STANDARD DEVIATIONS			
	Freshmen N=25	Sophomores N=18	Total Group N=43	Norm Group	Freshmen	Sophomores	Total Group	Norm Group
Achievement	13.360	14.000	13.628	15.66	3.740	5.006	4.221	4.13
Deference	11.480	12.611	11.953	11.21	4.043	4.767	4.291	3.59
Order	10.080	9.000	9.628	10.23	4.591	3.850	4.232	4.31
Exhibition	13.160	12.667	12.953	14.40	3.051	3.710	3.270	3.53
Autonomy	14.920	13.889	14.488	14.34	4.142	4.351	4.162	4.45
Affiliation	16.280	15.389	15.907	15.00	3.680	3.913	3.716	4.32
Intracception	13.120	16.944	14.721	16.12	5.600	4.734	5.470	5.23
Succorance	11.440	10.222	10.930	10.74	5.165	4.373	4.776	4.70
Dominance	13.440	15.389	14.256	17.44	4.302	3.310	3.948	4.88
Abasement	16.160	15.833	16.023	12.24	5.064	2.916	4.207	4.93
Nurturance	14.400	15.389	14.814	14.04	3.819	3.466	3.623	4.80
Change	17.640	16.000	16.953	15.51	3.796	3.325	3.615	4.74
Endurance	11.640	13.667	12.488	12.66	5.837	5.729	5.744	5.30
Heterosexuality	19.360	18.000	18.791	17.65	6.324	5.636	5.944	5.48
Aggression	13.560	12.056	12.930	12.79	5.300	3.654	4.638	4.59

TABLE 2

MEANS, STANDARD DEVIATIONS, AND "t" VALUES OF THE EPPS
SUBSCALES FOR FRESHMAN AND SOPHOMORE SUBJECTS

Variable	Mean		Standard Deviation		"t" Ratio
	Freshmen	Sophomores	Freshmen	Sophomores	
Achievement	13.360	14.000	3.740	5.006	-0.480
Deference	11.480	12.611	4.043	4.767	-0.840
Order	10.080	9.000	4.591	3.850	0.813
Exhibition	13.160	12.667	3.051	3.710	0.478
Autonomy	14.920	13.889	4.142	4.351	0.789
Affiliation	16.280	15.389	3.680	3.913	0.763
Intraception	13.120	16.944	5.600	4.734	-2.353*
Succorance	11.440	10.222	5.165	4.373	0.812
Dominance	13.440	15.389	4.302	3.310	-1.708
Abasement	16.160	15.833	5.064	2.916	0.245
Nurturance	14.400	15.389	3.819	3.466	-0.870
Change	17.640	16.000	3.796	3.325	1.470
Endurance	11.640	13.667	5.837	5.729	-1.132
Heterosexuality	19.360	18.000	6.324	5.636	0.727
Aggression	13.560	12.056	5.300	3.654	1.038

*Significant at the .05 level of confidence with 41 degrees of freedom

TABLE 3

MEAN, STANDARD DEVIATION, AND "t" VALUES OF THE MTAI SCORES
FOR FRESHMAN, SOPHOMORE, AND NORM GROUP DATA

Group	MEAN		STANDARD DEVIATION		t
	Subjects	Norm Group	Subjects	Norm Group	
Freshmen	-3.467	14.67	27.095	34.94	-0.103
Sophomores	-2.667		27.814		

Both the freshmen and the sophomores scored well below the mean score of the University freshman normative group,¹ as seen in Table 3. This indicated that the subjects studied were not as democratically oriented as those in the norm group. No significance was found in the "t" ratio between the two groups (freshmen and sophomore) on the MTAI at the .05 level of confidence.

TABLE 4

PEARSON-PRODUCT MOMENT CORRELATIONS FOR EACH EPPS SUBSCALE
AND THE MTAI SCORES OF THE FRESHMEN

Variable Correlated with MTAI Score	r	Variable Correlated with MTAI Score	r
Achievement	-0.1395	Dominance	0.3396
Deference	-0.2488	Abasement	-0.1991
Order	-0.6389*	Nurturance	0.4151
Exhibition	0.1742	Change	0.0041
Autonomy	-0.0791	Endurance	0.0373
Affiliation	0.0461	Heterosexuality	0.3552
Intracception	0.1624	Aggression	0.0010
Succorance	-0.2759		

*Significant at the .05 level with 24 degrees of freedom

¹Walter W. Cook, Carroll H. Leeds and Robert Callis, Manual: Minnesota Teacher Attitude Inventory (New York: The Psychological Corporation), p. 6.

As Table 4 shows, the Order subscale on the EPPS was the only one found to be significantly correlated with the MTAI results. The finding indicated that the need to be highly organized and arranged, as measured by the EPPS, was related to the tendency to be more autocratic in nature, as measured by the MTAI.

TABLE 5

PEARSON-PRODUCT MOMENT CORRELATIONS FOR EACH EPPS SUBSCALE
AND THE MTAI SCORES OF THE SOPHOMORES

Variable Correlated with MTAI Score	r	Variable Correlated with MTAI Score	r
Achievement	-0.5314*	Dominance	-0.1394
Deference	0.0813	Abasement	-0.2460
Order	-0.2328	Nurturance	0.0906
Exhibition	0.1087	Change	0.1809
Autonomy	0.0753	Endurance	-0.2364
Affiliation	0.2555	Heterosexuality	0.3809
Intracception	0.1567	Aggression	-0.2568
Succorance	0.2078		

*Significant at the .05 level of confidence with 24 degrees of freedom

As seen in Table 5 the relationship between the Achievement subscale and the MTAI results as measured by the Pearson-Product Moment Correlation, was significant at the .05 level of confidence. Consequently, the sophomore need to be successful and accomplished was significantly related to the autocratic attitude toward the teaching situations as measured by the MTAI.

As Table 6 shows, the Achievement, Order, and Heterosexuality scores of the total group were significantly related to the MTAI score. The results indicated that high needs to be successful and better than others, and to be well organized, were significantly related to

autocratic attitudes. Additionally, the higher the democratic attitude possessed, the higher the need to relate to others of the opposite sex resulted. To explain the democratic attitudes mentioned in relation with the Heterosexuality subscale required the following understanding. The MTAI results in Table 3, of page 24, pictured the subjects as autocratic when compared with the norm group of the test. However, when each of the EPPS subscale scores were correlated with the MTAI scores, only the data of the subjects were used. Each subscale must be considered as a separate entity and it is not always possible to reach a composite conclusion when dealing with several of the EPPS variables at one time.

TABLE 6

PEARSON-PRODUCT MOMENT CORRELATIONS FOR EACH EPPS SUBSCALE
AND THE MTAI SCORES OF THE TOTAL GROUP

Variable Correlated with MTAI Scores	r	Variable Correlated with MTAI Scores	r
Achievement	-0.3188*	Dominance	0.1822
Deference	-0.0881	Abasement	-0.2083
Order	-0.4904*	Nurturance	0.2947
Exhibition	0.1370	Change	0.0531
Autonomy	-0.0223	Endurance	-0.0606
Affiliation	0.1257	Heterosexuality	0.3530*
Intracception	0.1748	Aggression	-0.0925
Succorance	-0.1031		

*Significant at the .05 level

CHAPTER IV

DISCUSSION

A discussion of the results of this study have been presented in this chapter.

The findings in Table 1 of page 22 may indicate that the freshman subjects' results on the EPPS did not conform to the normative sample's as closely as did the sophomores because they did not represent the general college population as typically as did the sophomores.

It was interesting to note a greater difference between the freshman sample and the norm group than between the sophomores and the norm group in the Heterosexuality subscale. A possible explanation for this result could be that freshmen, away from home and in a hurry to be mature and sophisticated, thought it expected of college men to be much more liberal in matters concerning sex than they actually were. Sophomores, on the other hand, more secure and realistic, responded more conservatively, if not honestly. However, both groups did indicate higher needs on this variable than did the normative group.

Since the sophomores scored significantly higher than the freshmen, at the .05 level, on the Intraception subscale, they could be described as being more empathetic and self-analytical. The sophomores may have been more secure and less hampered by doubts of their position and were freer to inspect the action of others.

One finding noted was the difference between the freshman and sophomore results on the Dominance subscale. This difference was significant at near the .10 level. Since the recorded sophomore mean score was higher than that of the freshmen, it can be assumed that their need to be leaders and supervisors was greater. Freshmen, as a rule, are not the "take-charge" type of students, but perhaps sophomores were beginning to emerge as more forceful in implanting their attitudes and ideas on others. Their sense of security and maturity might have affected the responses.

No significant difference was found when the results on the MTAI of the freshmen and sophomores were contrasted by the "t" test. Therefore, no differences in their democratic/autocratic attitudes appear to exist, as measured by the Inventory. Since the MTAI Manual does not provide a norm sample consisting of sophomores in Education this fact reduces the discriminatory power of the MTAI.

Since the subjects of this study scored well below the mean of the norm group which consisted of freshmen in the College of Education at the University of Missouri, both groups appeared less democratic in their attitudes toward teaching situations than did the normative sample.

When the Order subscale of the freshmen was correlated with their MTAI scores, the relationship between these items was significantly related less than the .01 level. Such a high correlation strongly indicated that the freshman group, while feeling a manifest need for a systematic and well-planned existence, were also autocratic in their attitudes as measured by the MTAI. This was an understandable outcome, since, in order to arrange activities to occur when and

how they are wanted, the individuals were also more self-centered and more heedless of the feelings of others.

The Nurturance subscale scores, correlated with the MTAI scores of the freshmen, showed significant correlation at the .10 level. This positive relationship implied that the freshmen, feeling a need to help, forgive and like others, as revealed by the EPPS, also tended to be respectful and liberal when dealing with others, as evidenced by their MTAI scores.

The Dominance and Heterosexuality subscales of the Edwards approached positive significance at the .10 level when compared with the MTAI scores of the freshmen. Therefore, the freshman group, while expressing democratic attitudes, also tended to be liberal in their manifest need for sexual activities and desired the position of organizer and leader.

The Achievement subscale of the sophomores and the MTAI scores were significantly related. As noted in Chapter III, such a relationship strongly suggested that the sophomore subjects expressed a need to be recognized as an authority and as a person of importance while exhibiting autocratic attitudes. This correlation was accepted as meaningful because, in order to be respected by others and to be successful, an individual must be a self-actualizing, individualistic sort. Such a person would not often be found who, as well, accepted the weaknesses and differing opinions of others as would the democratic thinker. The two characteristics would not normally freely interact in one person.

The Heterosexuality subscale scores of the sophomores and their MTAI totals, approached a significant relationship at the .10 level.

As with freshmen, this relationship suggested that the sophomores, exhibiting attitudes liberal and understanding, were more open in their discussion about sexual matters and freer in their association with the opposite sex.

It had been hypothesized that the MTAI would correlate positively with the Nurturance and Succorance subscales of the EPPS. It seemed probable that an individual who cared for others and who needed others to care for him would also express democratic, rather than autocratic, attitudes as measured by the MTAI. Furthermore, it was also hypothesized that the MTAI would correlate negatively with the Dominance and Aggression subscales of the EPPS. It seemed logical that an individual who desired to be a leader and organizer, and who ridiculed and shamed others, could not also be an open-minded, considerate, democratic-oriented educator. From Table 5 of Chapter III, it can be noted that this trend did emerge for the sophomores, although no statistical significance was reached in any of these four subscales. However, such strong trend results did not occur when the four EPPS subscales and MTAI scores were correlated for the freshmen and the total group.

The Pearson-Product Moment Correlation method was used with the results of the total group of subjects to determine the relationship of the EPPS subscales and the MTAI. The greatest degree of significance was found in the Order subscale which was significant at the .001 level. Thus, as a group, there was a high relationship between systematic, organized needs and expressed autocratic attitudes. This relationship may be logical since orderly, neat individuals cannot afford the luxury of considering the feelings of others in order to

maintain their own well-planned life. It is practically a selfish situation that does not take into account the desires or ideas of others. Thus, autocratic feelings would accompany such a need.

The Heterosexuality subscale correlated significantly, at the .05 level, with the MTAI scores of the total group. This may be understandable, since a liberal-minded person would be a mature, outgoing type, interested in the opposite sex and sex-oriented ideas, among others.

The Achievement subscale was also significantly related at the .05 level with the MTAI scores for the total sample. The relationship was negative and the subjects can be pictured as possessing the need to be successful and recognized as an authority while tending to be autocratic in teaching attitudes. Furthermore, this picture appeared to be that of a high achiever with little regard for the ideas of others, except for their praise of his own work (autocratic).

Again using the data of the total group, the Nurturance subscale of the EPPS was positively correlated with the MTAI results at the .10 level. Thus, while expressing a need to be helpful and kind to others, the subjects also exhibited attitudes of democratic opinion. These two traits seem to be complimentary.

In contrasting these findings with other cited studies found in Chapter I, some consistencies appeared. If by "socially aware" and by "sociable" Wozencraft,¹ Lo Maglio,² and Gross³ meant at ease

¹Wozencraft, op. cit., p. 8.

²Lo Maglio, op. cit., p. 211.

³Gross, op. cit.

with the opposite sex, then the subjects possessed traits thought required and expected of physical educators since their responses on the Heterosexuality subscale of the EPPS were higher than those of the normative group.

The freshmen scored higher than the EPPS norm group on the Order subscale. This was another characteristic of Lo Maglio's¹ sample.

If it can be accepted that by possessing the need to be successful and a recognized authority, the quality of self-confidence, as described by Gross,² and self-centered as described by Wozencraft,³ were essential to be so, then the sophomore subjects were similar to those subjects described by these other authors.

Thompson⁴ stated that physical educators should be tolerant and cooperative. Both groups in this study scored higher than the norm group of the EPPS on the Deference subscale.

Gross' subjects were persevering and determined.⁵ The EPPS subscale, Endurance, revealed that both the freshmen and sophomores were also more inclined in this direction when compared with the normative group.

The physical education subjects in Locke's study scored significantly higher than teachers of other fields on the Succorance,

¹Lo Maglio, ibid.

²Gross, ibid.

³Wozencraft, ibid.

⁴Thompson, op. cit., pp. 422-428.

⁵Gross, loc. cit.

Affiliation, and Nurturance subscales of the EPPS.¹ The freshmen of this investigation scored higher than the normative group of the EPPS on the Succorance subscale.

As was noted in the summary following the survey of literature in Chapter I, that there existed a wide range of traits that were found by the various writers to describe a physical educator. This study followed a similar pattern since it, too, did not generally agree with any previously reviewed investigation. However, similarities were found between other studies and aspects of other studies. A difficulty encountered by this writer in comparing results with others was the difference in purpose and design among the studies.

It was the intention of this writer to lay the foundation for personality screening of male physical education majors at the University of North Dakota. Such a process could not be implemented until it was determined what type of student was successful, both academically and professionally, during his college training. The data obtained from this study described the traits possessed by the subjects, and a later follow-up may help to indicate which characteristics seemed to coincide with success. Obviously, further studies done in a similar manner are a necessity for greater reliability.

Summary

In discussing the results of this investigation, the writer noted similarities and differences between the freshman and sophomore subjects and the norm groups on the two tests used. The meanings and implications of significant relationships and differences were analyzed.

An attempt was made in contrasting the conclusions of previously reviewed research with the results of this study. Some similarities were found, but generally, methodological differences and different measures of personality made direct comparisons difficult.

The intent of this study and its relationship to personality screening was discussed.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The purpose of this study was to compare psychological needs and educational attitudes of a sample of freshman and sophomore subjects majoring in physical education at the University of North Dakota.

The Edwards Personal Preference Schedule was administered to reveal the manifest needs of the subjects. The Minnesota Teacher Attitude Inventory was used to determine the subjects' attitudes as related to various teaching situations.

The "t" test was used to compare the scores of the freshmen and sophomores on each of the fifteen EPPS subscales to determine if significant differences in psychological needs existed between the two groups.

The "t" test was used to compare the freshman and sophomore scores obtained on the MTAI.

The Pearson-Product Moment method was used to correlate the fifteen EPPS subscales with the MTAI scales for both the freshmen and sophomores.

All results that reached or exceeded the .05 level of confidence were accepted as significant.

Conclusions

The following conclusions were based on an analysis of the data.

1. The sophomore subjects were significantly more empathetic and intrceptive than the freshmen.
2. No significant difference existed between the freshmen and sophomores in their attitude toward various teaching situations.
3. Among the freshman subjects, the need to be orderly was associated with exhibiting autocratic attitudes toward teaching.
4. Among the sophomore subjects, the need to be high achievers was related to exhibiting autocratic attitudes toward teaching.
5. As a total group, the freshman and sophomore subjects were described as autocratic when compared with a norm group consisting of University freshmen in the College of Education at the University of Missouri.
6. As a total group, the freshman and sophomore subjects were pictured as orderly individuals, needful of achievement, with autocratic attitudes toward teaching. The subjects further tended to possess the need to be highly sex-oriented while exhibiting democratic attitudes toward teaching.

Recommendations

The recommendations that have been made as a result of this study were:

1. That a study be replicated in the following years, again using freshmen and sophomores as subjects, to obtain additional data for more composite, reliable results.
2. That a follow-up study be conducted during the remaining college years of the subjects of this present study.
3. That a record be kept of the academic and professional success of all the subjects, both of this and later studies, and a comparison be made of their manifest needs and teaching attitudes exhibited throughout their college training, and particularly with their record of the freshman year. This design would be used to determine if significant correlations existed between teaching success and academic characteristics.
4. That, should these procedures outlined in Recommendations 1-3 prove to be reliable and valid in determining the professional success of the subjects, then they should be used as a part of an overall screening process for potential majors of physical education.

APPENDIX

EPPS AND MTAI SCORES OF THE FRESHMEN

		MTAI	Achievement	Deference	Order	Exhibition	Autonomy	Affiliation	Intracception	Succorance	Dominance	Abasement	Nurturance	Change	Endurance	Heterosexuality	Aggression	Consistency
1.	M. B.	28	15	8	8	17	13	16	3	16	19	8	15	16	7	27	22	11
2.	K. B.	-49	16	15	21	16	12	18	12	18	2	23	13	12	12	10	10	15
3.	D. C.	-44	12	15	17	7	11	13	11	12	13	21	16	16	13	16	17	11
4.	W. C.	-12	14	12	4	11	17	16	9	12	11	17	16	22	9	26	14	12
5.	W. F.	25	12	9	10	10	9	16	19	5	14	25	18	21	14	16	12	10
6.	B. G.	-1	12	12	9	10	17	15	17	13	10	12	11	19	2	25	26	10
7.	E. G.	-60	12	13	14	12	18	22	12	19	11	19	12	23	12	13	9	13
8.	S. H.	114	12	13	5	19	18	15	18	5	21	5	9	18	7	28	17	13
9.	P. H.	11	13	16	10	13	19	12	25	1	17	21	16	9	26	3	9	11
10.	J. H.	11	14	20	6	17	11	10	13	12	14	11	15	19	17	18	17	10
11.	D. H.	-12	19	16	16	13	16	17	10	12	13	16	10	14	9	18	11	12
12.	D. J.	4	16	8	11	17	10	16	13	11	18	14	6	18	6	23	17	10
13.	G. J.	4	15	8	12	9	13	19	9	9	14	11	19	21	12	25	14	12
14.	B. L.	-45	13	8	10	10	12	16	23	22	16	18	11	19	15	10	7	10
15.	W. L.	21	11	7	9	16	14	17	13	10	13	16	20	11	10	27	16	12
*16.	L. L.	20	12	13	11	16	12	14	11	14	15	13	15	16	15	18	15	8
17.	W. L.	50	14	10	3	12	20	15	15	7	16	14	18	20	7	24	15	11
18.	J. M.	26	2	8	4	14	11	24	13	16	14	18	22	16	16	23	9	13
19.	J. M.	-26	14	13	7	14	18	19	5	20	8	18	15	16	3	19	21	14
20.	L. N.	-18	8	13	11	15	17	14	9	15	9	16	13	17	16	20	17	11
21.	W. P.	-46	10	17	14	14	13	14	13	7	14	12	13	14	17	19	19	12
*22.	D. P.	-11	18	11	8	18	12	8	11	12	22	21	14	12	11	19	13	8
23.	B. P.	-15	20	7	18	11	18	11	19	7	11	17	9	19	9	23	11	11
*24.	L. R.	20	15	9	4	12	14	23	19	5	10	26	21	11	10	22	9	9
25.	G. S.	10	16	16	6	16	17	18	14	10	14	23	13	19	14	20	4	11
*26.	P. S.	-9	17	13	11	13	12	12	20	12	14	14	12	14	15	14	17	9
*27.	G. T.	-7	11	4	4	8	14	18	14	19	18	14	20	19	20	19	16	9
28.	J. W.	31	12	12	9	9	4	23	4	12	7	22	18	17	24	11	9	13
29.	M. W.	-3	12	3	10	13	24	21	7	19	17	9	7	26	5	17	10	12
30.	P. W.	-21	20	8	8	14	15	14	5	6	20	18	15	19	9	23	16	13

*The EPPS scores of subjects 16, 22, 24, 26 and 27 could not be used because their consistency scores were below the level considered meaningful.

APPENDIX

EPPS AND MTAI SCORES OF THE SOPHOMORES

		MTAI	Achievement	Deference	Order	Exhibition	Autonomy	Affiliation	Intracception	Succorance	Dominance	Abasement	Nurturance	Change	Endurance	Heterosexuality	Aggression	Consistency
1.	W. B.	13	14	14	5	13	17	11	12	12	13	13	13	22	13	25	13	12
*2.	D. B.	2	12	8	7	18	14	12	23	14	16	16	17	17	12	19	5	8
3.	D. C.	57	7	8	8	14	15	16	22	10	14	12	21	16	12	25	10	12
4.	J. E.	-25	16	14	11	9	15	19	9	13	15	18	18	17	6	18	11	12
5.	J. F.	13	14	18	15	7	13	22	13	7	18	18	16	13	19	11	6	11
6.	D. G.	-34	15	11	12	12	12	10	21	8	19	22	15	15	21	3	13	11
7.	J. H.	51	10	13	6	17	9	17	25	12	19	16	16	13	11	19	7	10
8.	A. H.	4	5	22	11	9	10	19	18	16	11	16	10	17	18	17	11	13
9.	J. J.	-19	19	3	4	18	20	13	15	5	19	11	13	19	11	21	19	10
10.	J. J.	-7	16	13	8	18	13	17	15	12	19	14	14	13	19	10	9	11
11.	D. L.	20	9	13	9	14	25	9	21	9	15	12	12	15	9	20	18	12
12.	P. L.	-35	19	12	19	6	11	11	25	6	12	15	17	14	21	15	7	12
13.	M. L.	42	11	13	9	10	14	17	15	15	11	18	16	22	8	20	11	11
*14.	R. M.	-11	9	12	6	8	16	17	22	6	18	20	17	18	15	12	14	8
15.	W. P.	-13	16	10	7	16	7	14	14	12	19	17	14	17	15	21	11	13
16.	V. P.	-13	15	9	5	15	10	15	20	20	11	20	24	12	13	14	17	12
17.	H. R.	-19	19	13	5	10	12	12	16	6	19	15	12	19	14	23	15	14
18.	R. S.	7	13	10	8	10	17	21	12	6	12	18	16	19	13	22	13	11
19.	B. S.	-36	10	12	8	14	18	14	20	12	13	16	17	15	9	19	13	12
*20.	L. T.	-38	17	10	11	17	17	16	12	7	21	12	8	18	12	11	21	8
21.	R. T.	-15	14	9	12	16	12	20	12	3	18	14	12	10	24	21	13	12

*The EPPS scores of subjects 2, 14 and 20 could not be used because their consistency scores were below that level considered meaningful.

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